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New Syrphid Flies from Mississippi

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Several new species of Syrphids have been collected in Mississippi during the past year. This paper describes these species.

***Mallota mississipensis* n. sp.**

Flies with the femora, the tarsi and hind tibiae wholly black, the male eyes rather widely separated, the thoracic pile reddish orange and the pile of the abdominal segment alternating yellow and black. Related to *illinoisensis*.

Male. Length 12 mm. *Head*: Eyes bare, the vertex shining brassy black, rather convex, the eyes separated by a distance between facets equal at least to the apical width of the second antennal segment in the lateral view. Pile of upper occiput and vertex light yellow, the frontal hair which arises from that part of the front above the narrowest portion is sub-appressed and directed upward and backward; pile of the lower front and face nearly white. Face with a shining middle stripe and the cheeks black. The sides of the face are widely yellowish white pubescent with abundant similar colored pile. The

three segments of the antennae wholly black, the arista quite short, about as long as the last two antennal segments, much thickened and reddish brown, the apex sharpened. *Thorax*: mesonotum black, overlaid with pale brownish yellow pollen and very dense, orange reddish pile. Ground color of the scutellum subtranslucent, light brownish yellow, its pile orange reddish. Squamae pale brownish yellow with orange brown border and yellowish fringe. Pleural pile thick, pale yellowish white. *Abdomen*: shining black, the pile of the first segment reddish yellow, upon the second segment brownish yellow except upon the apical fourth where it is black widely through the middle, almost to the sides. The third segment is similarly pilose, the black pile beginning in the middle about half way down the length of the segment and expanding outward as an obtuse triangle almost to the posterior corners. The fourth segment has similar black pile but beginning a little closer to the base. *Legs*: The femora are shining black with chiefly yellowish white pile. Upon the massively thickened hind femora there is some black pile at the extreme apex above and again subapically along the outside and extensively along the entire ventral and medio-ventral surface. The only light coloration upon the femora is the quite linear apical margin which is light brown. Anterior tibiae upon the basal fourth and middle tibiae upon the basal third light brown which quite diffusely shades into the remaining black part of these tibiae. Hind tibiae quite black including the knees. Tibial pile chiefly pale yellow with some black intermixed especially towards the apex on all three pairs. Hind tibiae considerably flattened. All of the tarsi wholly black and black pilose dorsally but with reddish yellow or brown pile ventrally. *Wings*: greyish hyaline, the veins upon the basal third yellowish brown, the third and fourth veins beyond the middle dark brown. There is a pale brownish cloud at the base of the submarginal cell extending above and below it and more faintly upon the end of the second basal cell. There is a very strong stigmal cross vein but the stigmal cell is greyish hyaline.

Holotype: a male, Oxford, MISSISSIPPI, March 11, 1945. (F. M. Hull collector.) Caught on wild plum blossom quite high up at the top of the tree. In Curran's key to *Mallota* species, this fly would go to *illinoisensis*, differing in the black legs and banded pile. I have compared it with specimens of *illinoisensis* before me.

***Volucella anastasia* n. sp.**

A small blackish species with considerably reduced pattern and related to *fasciata* Macquart. There are no yellow spots upon the sternopleura or propleura.

Male. Length 6.5 mm. *Head*: Vertex black, the front widely yellowish along the eyes but shining sepia black on the anterior half before the antennae. The face is polished black with on either side a wide, pale yellow stripe which becomes attenuated and a little more brownish towards the sharply conical epistoma. The posterior part of the cheeks is divided by a narrow, obscure, reddish brown vitta; pile upon the black middle stripe black, upon the sides of the face brownish yellow. The antennae are sepia brown. The pile of the eyes is dense, long and blackish brown with some pale hair posteroventrally and a middle vertical band of denser blackish pile. *Thorax*: Mesonotum shining black with long thick pile which is chiefly black; there is some yellowish pile anteriorly before the suture. The humeri, and a diagonal, sublateral yellowish vitta which is divided by a crease and a much narrower posterior extension which lies beyond the suture and which is evanescent just before the post calli, are all pale yellow. There is a fairly large yellow spot on the posterior part of the mesopleura, a yellow spot on the metapleura immediate beneath the yellowish squamae and a tiny yellow spot diagonally below in front of it which may be upon the extreme upper part of the hypopleura. The scutellum is yellowish, the disc subtranslucent brown, the pile very thick and black. Just before the scutellum are a pair of tiny yellowish brown spots. Halteres with cream colored knobs. *Abdomen*: black, the second segment with a narrow, medial, quite widely separated yellowish brown fascia. Third

segment with a posteriorly indented fascia of the same color; the basal margin of the fourth segment is linearly yellowish brown, the posterior margin quite black; pile of the abdomen pale yellowish straw colored, black upon the hypopygium. Venter with a pair of basal, medially separated, subtranslucent yellowish spots which do not reach the sides; third strenite black, its extreme base linearly yellowish. *Legs*: black, first two segments of the first four tarsi and first three segments of the posterior tarsi reddish yellow; basal third of all of the tibiae and the apex of their femora yellow. Pile of legs black everywhere except upon the yellow segments of the tarsi where it is golden. Wings with a fasciate pattern similar to *fasciata* Macquart. The apex of the marginal cell is less protuberant and the brown of the wings a little more smoky.

Holotype: a male, University, MISSISSIPPI, May 30, 1944 (F. M. Hull collector).

***Brachypalpus margaritus* n. sp.**

A large blackish fly, brassy yellow pile, distinguished from *oarus* Walker by the black tarsi, the black antennae and the spots on the cross veins and apex of wing. Length 9-12 mm.

Female. *Head*: Vertex and upper part of front shining bronze, the lower part of the front black with a slight brassy appearance; a small triangle of yellowish pubescence lies just above the antennae and there is a similar transverse band across the middle of the front. The face is deeply concave, shining brassy black, with a narrow band of yellowish pubescence from the antennae to the eye and a similar, slightly widening band from the lower part of the eye margin to the epistoma. All three segments of the antennae are wholly black, the arista thickened, orange brown basally, more yellowish apically. All the pile of the head yellow. *Thorax*: Mesonotum brassy black with four slender more or less opaque black vittae, the outer pair interrupted at the suture and these vittae narrowly margined with copper or bronze. The scutellum is brassy black. All of the thoracic pile is brownish yellow. Squamae yellowish white with yellow border and fringe; halteres light yellow-

ish brown. *Abdomen*: Broad, oval, wider than the thorax and shining black but slight brassy along the sides of the segments. The dense pile is erect and pale brownish yellow. *Legs*: The femora are black with a slightly brassy cast upon the hind pair which are rather thickened. The anterior and middle tibiae are brownish black except upon the basal fourth which is brownish yellow, and merges quite diffusely into the dark brown remainder. The hind tibiae are blackish; only the extreme base yellowish brown. All of the tarsi are black. The pile of the legs is brassy yellow, the hind femora with two or three rows of sharp, small, black spines upon the distal two-thirds of its length. *Wings*: Venation typical of *Brachypalpus*; the stigma is dark brown and there is a conspicuous dark brown cloud at the base of the submarginal cell spreading also above and below it and a similar brown cloud over the anterior cross vein and the end of the second basal cell. In addition, the apical fourth of the wing apex above the middle of the first posterior cell is rather strongly tinged with grey.

Holotype: a female, Oxford, MISSISSIPPI, March 10, 1945 (F. M. Hull collector). Caught on wild plum blossoms close to the ground. *Paratypes*: two females, March 11-13. Also on low blossoms of plum.

The Position of *Epione mollicularia* (Lep. Geometridae)

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Epione mollicularia Zeller was described in the Verh. zool.-bot. Ges. Wien, xxxviii, 481, 1872, on the basis of a male from Boll (we presume from the vicinity of Dallas, Texas) in the Museum of Comparative Zoology. The Packard collection, now also in the M. C. Z., has a second male, probably of the same lot, though without locality or collector label, and the only other specimen I have seen is one in the American Museum of Natural History from Arkansas, about half as old. Zeller's placing was reasonable for the time, since then venational characters were not much used in the geometers, and the appearance